

Patent
09/785,243

Clean Version of the Replacement Paragraph

Paragraph beginning at Page 11, line 13:

--A third embodiment of the heat transfer element is shown in Figure 3. In this embodiment, the perfluorocarbon supply conduit 20 has an outlet 30 in an interior chamber 32 at the distal end of the heat transfer element. The heat transfer element is a plurality of hollow tubes 34 leading from the interior chamber 32 of the heat transfer element to the perfluorocarbon return lumen 19 of the catheter body 18. This embodiment of the heat transfer element 34 can be constructed of a tubular material such as nitinol, which has a temperature dependent shape memory, or some other tubular material having a permanent bias toward a curved shape. The heat transfer element tubes 34 can be essentially straight, originally, at room temperature, but trained to take on the outwardly flexed "basket", or "oval" shape shown in Figure 3 at a lower temperature. This allows easier insertion of the catheter assembly 10 through the vascular system of the patient, with the essentially straight but flexible tubes. Then, when the heat transfer element 34 is at the desired location in the feeding artery, such as the internal carotid artery, refrigerant flow is commenced. As the expanding refrigerant cools the heat transfer element 34 down, the heat transfer element takes on the basket shape shown in Figure 3. This enhances the heat transfer capacity, while limiting the length of the heat transfer element.--